CYCLONE DUST COLLECTOR AND VACUUM CLEANER HAVING THE SAME

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of Korean Patent Application No. 2015-0146551, filed on Oct. 21, 2015 in the Korean Intellectual Property Office, the disclosure of which is incorporated herein by reference.

BACKGROUND

[0002] 1. Field

[0003] Embodiments of the present disclosure relates to a cyclone dust collector with improved usability and a vacuum cleaner having the same.

[0004] 2. Description of the Related Art

[0005] A vacuum cleaner is an apparatus which performs cleaning by suctioning air using a suction force generated from a fan and a motor and filtering foreign substances included in the suctioned air.

[0006] For filtering foreign substances included in suctioned air, a vacuum cleaner includes a dust collector therein so that the foreign substances are filtered by a predetermined filter. Such a filter that filters foreign substances in the dust collector includes a porous filter by which foreign substances are forcibly filtered while air passes through the porous filter and a cyclone type dust collector by which foreign substances are filtered out during cyclonic air flow.

[0007] A cyclone dust collector may be widely used for a canister type vacuum cleaner, an upright type vacuum cleaner, a hand type vacuum cleaner, etc.

[0008] The cyclone dust collector may include an inlet into which air is introduced and an outlet through which air is discharged to the outside. Air introduced into the inlet may be discharged to the outside after dust is filtered.

[0009] The outlet of the cyclone dust collector may be provided with a grill. An air passing hole may be formed in the grill to prevent dust of a certain size or more from escaping through the outlet. Due to directed air of the cyclone dust collector, large dust, hair, and the like may be wound around an outer circumferential surface of the grill. In a conventional cyclone dust collector, there is an inconvenience in that a user has to remove dust, hair, and the like wound around an outer circumferential surface of the grill by hand.

SUMMARY

[0010] Additional aspects and/or advantages will be set forth in part in the description which follows and, in part, will be apparent from the description, or may be learned by practice of the invention.

[0011] Therefore, it is an aspect of the present disclosure to provide a cyclone dust collector which can facilitate removing dust, hair, and the like wound around an outer circumferential surface of a grill when the grill is separated, and a vacuum cleaner including the same.

[0012] In according with one aspect of the present disclosure, a cyclone dust collector, the cyclone dust collector comprises a case configured to accommodate dust separated from suctioned air, a first cover configured to open, and close a bottom of the case and a grill assembly provided to be detachable from the case.

[0013] The grill assembly is pulled out of an upper part of the case.

[0014] The vacuum cleaner further comprises a second cover configured to cover an upper part of the case.

[0015] The second cover includes a cleaning part configured to remove dust adhered to a surface of the grill assembly.

[0016] The cleaning part is provided to protrude from a bottom surface of the second cover.

[0017] An opening through which the grill assembly passes is formed at the second cover.

[0018] The grill assembly includes a locking part configured to lock the second cover, and the second cover includes a locking hole into which the locking part is inserted and fixed.

[0019] The second cover includes a microfilter configured to filter dust from air.

[0020] The first cover includes a locking part locked to the grill assembly, and the grill assembly includes a locking hole into which the locking part is inserted.

[0021] The first cover includes a sliding hole through which the locking part passes.

[0022] The locking part moves in a radial direction in the sliding hole when the locking part is pressed by the grill assembly.

[0023] The first cover includes an elastic member configured to provide the locking part with an elastic force.

[0024] The locking part is moved in one direction when the locking part is pressed by the grill assembly, and the locking part is moved in the other direction by the elastic force of the elastic member to return to an original position thereof when a force applied to the locking part is removed.

[0025] The first cover is opened when the grill assembly is rotated in one direction.

[0026] The first cover is coupled by a hinge to the case.

[0027] In according with one aspect of the present disclosure, a cyclone dust collector comprises a case in which an inlet through which air is introduced is formed, a first cover configured to be positioned at one side of the case, a second cover configured to open and close the other side of the case, and a grill configured to be accommodated in the case and installed through the first cover and the second cover, wherein coupling between the grill and the second cover also is released when coupling between the grill and the first cover is released.

[0028] The second cover opens the other side of the case when the coupling between the grill and the second cover is released.

[0029] The second cover includes a locking part configured to be elastically supported, and the grill includes a locking hole into which the locking part is inserted and fixed.

[0030] The first cover includes a cleaning part configured to remove dust adhered to a surface of the grill when the grill is pulled out of the case.

[0031] The grill is provided to be detachable from the case, the first cover, and the second cover.

BRIEF DESCRIPTION OF THE DRAWINGS

[0032] These and/or other aspects and advantages will become apparent and more readily appreciated from the following description of the embodiments, taken in conjunction with the accompanying drawings of which: